

settled down for a rest. I found the locality very parched as no rain had fallen there for many weeks, but strangely enough, while I was there, a few clouds which had gathered overhead sent down a terrific shower of rain. After the rain, which lasted from 2 p.m. to 2.30 p.m., it continued to drizzle, but *jansei* flew about delighted over the places where I had searched so often and thoroughly before. I captured many perfect males and a few females, from which I obtained a number of eggs. That day I returned home profoundly happy, having succeeded in my quest after searching for six years.

Those who have had similar experiences will appreciate reading this account, I can assure them that I could probably have accomplished the task sooner if I had had more time at my disposal. I now appeal to collectors who read this to try and rediscover similar rare insects of which there are still quite a number in South Africa. These delicate creatures, which have to fight continuously against an untold number of enemies to survive, will soon disappear, since their chances of escaping fierce bush fires are becoming more and more remote.

In conclusion I wish to express my gratitude to Mr. G. van Son of the Transvaal Museum for information supplied regarding the species of *Leptoneura*; to Mr. Gowan C. Clark, of Port Elizabeth, who has so kindly undertaken to breed the larvae; and especially to Mr. W. Lotz, who also walked many miles in the long search for *L. jansei*.

New or little-known South African butterflies.*

by

G. VAN SON, M.Sc., F.R.E.S.,
Transvaal Museum, Pretoria.

Family **SATYRIDAE**

Genus **LEPTONEURA** Wallengren.

Leptoneura jansei Swierstra.

Annals of the Transvaal Museum, I, p. 175, 1911.

The holotype, a female taken on the farm Warmberg, Pietersburg District, Transvaal, on the 12th March, 1904, is in the Transvaal Museum. As no other specimens were found until very recently, the male of this species remained unknown, and I now

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take the opportunity of describing and figuring it and also giving an account and figure of its genitalia. (Plates I, II, fig. 1; text-fig. 1).

Description of male allotype. Slightly smaller than female (forewing 30.8 mm. as against 31.8 mm.), ground colour of body and wings, and antennae darker, yellow rings around ocellate spots of upperside narrower, on underside almost entirely absent, as are also the whitish suffusions bordering the dark markings of the female. As usual, wings comparatively shorter and broader than in female, outer margin of forewing straighter. *Antenna-wing ratio* 0.344.

Male genitalia. The general shape of the *uncus* and *scaphium* is very much the same as in *L. clytus*, except that the *uncus* is more downcurved. *Valve* with a short and broad unarmed basal process, it is much broader than in any other species of the *clytus*-group, dorsal margin (costa) irregularly denticulate and almost straight except in the distal fifth of the valve which is narrowed and slightly upturned. The distal margin forms an obtuse angle with the ventral margin and is itself obtusely angled at middle. The lateral processes of the *anellus* are much more prominent than in any other species of the group and are armed with long stout bristles forming compact narrow brushes pointing towards the middle of the distal margin of the valve and reaching a little beyond the valve's middle. *Aedoeagus* straight, one-and-a-half times the length of the valve, without basal prong, narrower than in other related species, the tip is hook-shaped like in *L. swanpoeli*. *Saccus* narrow, straight, about the length of the ventral margin of the valve.

Remarks. The *allotype* male and fourteen *paratypes* (12 ♂♂, 2 ♀♀) were taken by Mr. D. A. Swanepoel on the farm Tubex, near the Wolkberg range, Pietersburg District, Transvaal, and kindly presented to the Transvaal Museum.

A detailed account of Mr. Swanepoel's sustained efforts to rediscover this exceedingly local species appears elsewhere in this volume. The early stages of *L. jansei* are being studied by Mr. Gowan C. Clark, of Port Elizabeth, to whom a number of eggs were sent by Mr. Swanepoel.

Leptoneura mintha magna subsp. n. (Plates I, II, fig. 2, holotype ♂).

L. mintha (Geyer), Trimen, S.A. Butt. I, pp. 96-97 (1887) (partim.).

Holotype: ♂, Burghersdorp, C.P., 4 March, 1940 (G. van Son); *Allotype*: ♀, hills along Molteno-Sterkstroom road, 4 March, 1940 (G. van Son); *Paratypes*: ♂, Burghersdorp; 3 ♂♂, 1 ♀, Molteno-Sterkstroom road, 4 March, 1940; 5 ♂♂, 1 ♀, Carlton, C.P., 24 March, 1940; ♀, Lootsberg, C.P., 24 March, 1940 (G. van Son); all in the collection of the Transvaal Museum.

Description of male holotype. Much larger than *mintha mintha* (forewing 30 mm. as against 25 mm. in largest specimens of *m. mintha*) and further differs from it in the following features:

The postdiscal band of forewing upperside and the postdiscal spots below it, much wider in proportion and almost pure white (ochreous in *m. mintha*); the minute subapical ocellus in R_s absent above (almost always present in *m. mintha*); fulvous suffusion along inner side of cross-streak in cell absent and the streak itself removed basad; ocellate spots of hindwing much more prominent, their encircling rings wider and bright yellow. On the underside of forewing there is an additional ocellus (in M_3) which is present in all other specimens (in 6 paratypes it is also developed above) and is absent in all specimens of *m. mintha* in the Transvaal Museum's collection. The characteristic white coloration of the veins of hindwing underside is less prominent than in *m. mintha*. *Antenna-wing ratio*: 0.4 (the same as in *m. mintha*). For comparison, a male of the nominotypical race is figured (Plates I, II, fig. 3).

Genitalia (Text-fig. 2). *Uncus* straight, about as long as tegumen and united with it without any visible suture. *Scaphium* dorsally concave, its distal half is narrowed and abruptly expanded at the truncate tip. The subscaphial membrane has two sclerotized areas placed one above the other, the upper one is deeply emarginate dorsally and therefore somewhat horse-shoe-shaped, the lower one is much larger, shield-shaped and only very slightly bisinuate above. *Valve*: basal margin concave, costa incurved near base, then slightly excurved; ventral and distal margins form a continuous curve; apex angular, though not prominently so; there is a raised transverse subapical ridge and a smaller angular longitudinal one between the first ridge and the middle of the ventral margin. *Anellus* widened ventrally, sides triangular, the posterior margins being the longest. *Aedoeagus* long, about one-and-a-half times the length of the valve, expanded in the basal third; tip obliquely excised, forming an acute apical spine, with a smaller tooth near its base.

Note. Compared with those of *m. mintha* (Text-fig. 3), the genitalia of *m. mintha* show a number of minor differences, such as the more elongate shape of the valve, more deeply emarginated upper sclerotised patch of the subscaphial membrane, and a thicker and straighter scaphium; but these differences are in my opinion insufficient to warrant a specific separation.

Description of female allotype. Very similar to the male, hindwing more elongate; traces of fulvous suffusion bordering the inner side of the transverse streak in cell and area A_1 of forewing and the outer side of the postdiscal line of hindwing; a trace of an additional ocellus in area M_3 of forewing upperside. *Antenna-wing ratio*: 0.37.

Remarks. This clearly distinct subspecies has been mistaken by Trimen who described it as the typical *mintha* Geyer. However, a glance at Geyer's figure leaves no doubt about this mistake. A series of eight males from Durbanville (Cape Peninsula) in the Transvaal Museum collection agrees well with Geyer's figure which

clearly shows a yellow (not white) postdiscal band of forewing, the additional ocellus in R_5 , the prominent fulvous edging of the cross-streak in cell of forewing and of the postdiscal streaks of hindwing. Trimen gives a description of it in *Rhopalocera Africae Australis*, p. 194 (as "Var. C" of *clytus*) and even mentions the "tripupillate ocellus" of forewing and the "fulvous-tinged inner band", but in his *South African Butterflies* he confuses it with the presently described subspecies.

Note. The antennae and the genitalia of *mintha* differ considerably from these structures in the *clytus*-group, and the erection of a new genus may become necessary when a complete revision of the genus *Leptoneura* is undertaken.

Family **LYCAENIDAE.**

Subfamily **Lipteninae.**

Genus **DURBANIA** Trimen.

Durbania amakoza ayresi subsp.n. (Plates I, II, fig. 4, holotype ♂, 5, allotype ♀).

D. amakoza, Trimen, S.A. Butt. II, pp. 215-216 (1887) (*partim*) nec *D. amakoza* Trimen, Trans. ent. Soc. London (3), I, p. 401 (1862).

Holotype ♂, *allotype* ♀ and 4 ♂♂, 2 ♀♀ *paratypes*, Kastrol Nek, Wakkerstroom District, Transvaal, January, 1922 and 1925 (G. P. F. van Dam); ♂♀, Barberton, Transvaal, no date (Rev. Knottenbelt); 2 ♂♂, Marieps Mountain, N.E. Transvaal, January 1925 (G. van Son); all the above in the Transvaal Museum collection.

Description of male holotype. Differs from the male of the nominotypical *amakoza* as follows: *Antennae* more prominently checkered with white; *forewing* with postdiscal spots much larger; *hindwing*: postdiscal spots very much larger and fused into a continuous band with rather even edges; *underside forewing*: orange area much wider, twice the width of the grey terminal area; dark discal spots delimiting inner edge of orange area arranged in two straight lines forming a right angle on vein M_2 at one-third from its origin; *hindwing*: postdiscal sagittate spots prominently tinged with orange.

Length of forewing 14 mm. *Antenna-wing ratio* 0.4 (as in *a. amakoza*).

Description of female allotype. Much larger than male (forewing 19.5 mm.) and very different from it in appearance. *Forewing* orange-yellow from base to as far as the terminal area, leaving only a terminal blackish band, widest at apex and diminishing in width along costa to end of vein R_2 , widest between R_5 and M_1 (4 mm.), produced basad at vein M_1 , of about equal width (2 mm.) between just below vein M_1 and Cu_2 , thence gradually reduced in width to tornus, being slightly angled at Cu_2 . Costal area from base to about middle black, produced slightly outwards along vein R_2 ; a broad black quadrangular discocellular bar connected with

the costal area; a black patch in cell at two-thirds from base, separated from the discocellular bar by a small orange area at end of cell, but connected with it by a narrow black suffusion along the lower margin of cell (in some paratypes there is no orange at end of cell).

Hindwing almost entirely orange-yellow, except for a slight blackish suffusion along the costa, a dense black suffusion along upper margin of cell, a diffuse suffusion in cell except near its end and along anal margin, and a marginal band of about 2 mm. width, narrowed along the costa and in the anal area.

Remarks. Trimen's records of *amakoza* from the Lydenburg District of the Transvaal must be referred to this subspecies which has a fairly extensive range over the higher parts of the Eastern Transvaal and probably the adjoining parts of Natal, extending southwards along the Drakensberg. The form from the Albany District which Trimen says has the orange markings even more developed than the Transvaal one, is most probably distinct from *a. ayresi*, as a single male in the Transvaal Museum from Alicedale, C.P., 22 Nov., 1939 (G. C. Clark), which very nearly agrees with Trimen's account of the Albany form, has no trace of orange in the discal spots of hindwing underside which is present in all Transvaal specimens seen by me.

I dedicate the presently described subspecies to the late Mr. T. Ayres whose extensive collecting in the then very inaccessible parts of the Eastern Transvaal resulted in many interesting discoveries.

The *male genitalia* of *ayresi* (Text-fig. 4) show several minor differences compared with those of *a. amakoza* (Text-fig. 5), but not of such a nature as to suggest specific separation; the apparent difference in the ventral part of the IXth sternite is due to the fact that this part, which is normally invaginated (as shown in the figure of *amakoza*) became everted in *ayresi* while mounting, thus forming a "pseudosaccus" (as opposed to a real *saccus* which is a sclerotized pouch-like invagination incapable of being everted).

Durbania clarki sp.n. (Plates I, II, fig. 6, holotype ♂; 7, allotype ♀),

Holotype ♂, *allotype* ♀, Seven Weeks Poort, C.P., 17 November, 1940 (G. van Son);

Paratypes: 19 ♂♂, 6 ♀♀, same locality and date; 4 ♂♂, Kandelaars, (20 miles South of Oudtshoorn, C.P.), 8 November, 1939 (G. C. Clark); 1 ♂, 2 ♀♀, Garcias Pass, 15 November, 1940 (V. Fitzsimons); all the above are in the Transvaal Museum collection.

Diagnosis. In appearance nearest to *D. amakoza*, but hindwing without any black basal area. Male genitalia with strongly developed falces (paired processes of the scaphium) which are absent in *amakoza*.

Description of male holotype. Head, palpi, thorax and legs black, prominently irrorated with white scales; antennae black,

shaft conspicuously checkered with white, club very broad and flat, slightly irrorated with white above, much more so along inner half below, black along outer side and at tip. *Abdomen* above with the two basal segments irrorated with brown and white scales, the remaining segments irrorated with brown scales; underneath white from base to 4th segment, remainder Old Gold (Ridgway, XVIi) ringed with whitish at distal ends of segments except the last two which are edged with black. *Tarsi* of legs black ringed with white at ends of joints.

Upperside: forewing: costal, terminal and the greater part of the discal area black; cell and the whole of supramarginal area except near outer margin, as well as a series of small postdiscal spots and traces of minute submarginal spots in the subapical area, Xanthine Orange (Ridgway, IIIi), very sparingly irrorated with black scales in cell and basal half of supramarginal area.

Hindwing: Xanthine Orange except in costal and outer-marginal areas which present a black marginal band 1.8 mm. wide and in the anal-marginal area which is white irrorated with black scales. *Cilia* of both wings black checkered with small but very distinct white spots between the veins. *Underside* of both wings black irrorated with white scales.

Forewing: a postdiscal Xanthine Orange band about twice the width of the spots above, edged distally with a series of black bars, the one in M_1 being the widest. Outer edge of the black area adjoining the orange band on the inner side roundly excurved between costa and vein M_2 where it is angled, thence straight to vein A_2 at two-thirds from its base. Veins irrorated with white scales. Supramarginal area orange dusted with black at base and middle.

Hindwing black, irrorated with white scales which are more densely aggregated to form indistinct and irregular medial and discal transverse lines; two costal spots, one just outside the precostal spur, the other beyond middle of costa being the uppermost spot in a complete postdiscal series of white spots, the one above tornus is double; these spots are accompanied distally by less distinct white lunules edged with some black on their outer side. *Cilia* of both wings as on upperside.

Length of forewing: 13 mm. *Antenna-wing ratio*: 0.48.

Genitalia. (Text-fig. 6). *Uncus* fused with *tegumen*, truncate, with the sides angularly produced downwards and slightly backwards. *Scaphium* proper rudimentary but provided with very long, slightly upcurved *falces*. Valve elongate, one-and-a-half times longer than uncus and tegumen together, free part of costa half the length of ventral margin, apex bilobate, both lobes of about the same length, gradually narrowed to tip but not acute.

Aedoeagus a little longer than valve, with a broad and rounded basal prong, broad in the basal half, then rapidly narrowed (excised dorsally) to a long and acute tip in the distal half. *Anellus*

U-shaped, with the sides very narrow and not reaching the dorsal edge of the aedoeagus. Saccus absent, but ventral part of IXth sternite normally invaginated, its anterior edge being therefore directed posteriad; when evaginated, it forms a "pseudosaccus", e.g. an anterior projection of the IXth sternite being part of the external body-wall (a true saccus is a sclerotised invagination of the IXth sternite incapable of evagination and enclosed within the body cavity).

Description of female allotype. Larger than male, coloration and markings very similar.

Forewing: orange markings more extensive, postdiscal spots united into a band gradually widened from costa to M_3 , then of equal width to vein C_2 , where it is fused with the supramarginal orange area; subterminal series of orange spots more distinct than in male; on the underside the orange area is much broader (about 4.3 mm. wide).

Hindwing marked exactly as in male on upperside; below the postdiscal spots are more prominent, those in A_1 to M_1 are tinged with Orange-Buff (Ridgway IIIId) (in some of the paratypes these spots are white as in the male). *Length of forewing:* 14.4 mm. *Antenna-wing ratio:* 0.46.

Remarks. I have much pleasure in naming this interesting new species in honour of its discoverer, Mr. Gowan C. Clark of Port Elizabeth, who found it in November, 1939 at Kandelaars, in the Oudtshoorn District of the Cape Province, and kindly presented five males to the Transvaal Museum. In November, 1940 I was fortunate to meet this species in fairly large numbers on a very steep hillside to the West from the Southern end of Seven Weeks Poort.

Both sexes were found on certain lichen-covered rocks and when at rest were very difficult to see owing to the cryptic underside coloration. When first disturbed they flew up, but almost immediately settled down in such a way as to cause a minimum of shadow on the surface of the rock, and unless actually touched, refused to fly up again, which made their capture with the net rather difficult. The species is apparently confined to the mountains bordering, or situated within, the Little Karroo.

Subfamily **LYCAENINAE**

Genus **THESTOR** Hübner

(olim **Arrugia** Wallengren)

As pointed out by Hemming (Generic Names of Holarctic Butterflies, p. 113, 1934), out of the two species placed in this genus by Hübner, Scudder (1875) selected *petalus* Cramer (= *protumnus* L.) as the type. This fixation was later disregarded by Tutt who wrongly used the European species *ballus* as the type. Wallengren then created the genus *Arrugia* for *protumnus*. Therefore, *Arrugia* Wallengren is a synonym of *Thestor* Hübner.

Thestor braunsi sp.n. (Plates I, II, fig. 8, holotype ♂; 9, allotype ♀; 10, paratype ♀).

Holotype ♂, Willowmore, C.P., 17 March, 1940 (G. van Son);

Allotype ♀, same locality and date (D. A. Swanepoel);

Paratypes: 9 ♂♂, same locality and date (G. van Son); ♀, same locality and date (D. A. Swanepoel); all above in the Transvaal Museum collection; 3 ♂♂, 2 ♀♀, same locality and date (D. A. Swanepoel), in Mr. Swanepoel's collection.

Diagnosis. Related to *protumnus* L., but male smaller and darker, hindwing more angular, outer margin of forewing more straight. A dark spot in the distal half of cell of forewing above; discal bands of both wings in both sexes broader and placed nearer to base; on the hindwing underside, the discal band is strongly excurved between M_2 and M_1 , especially in the male. The male genitalia differ from those of *protumnus* in the much smaller, longer-stalked uncus; in the bilobate distal end of the valve; and the much longer and acutely produced aedoeagus.

Description of the male holotype. Vertex of head, thorax and abdomen above black clothed with Saccardo's Umber (Ridgway, XXIXm) hairs; antennae Sepia (XXIXm) above, Snuff-Brown (XXIXk) below, whitish on outer side and at tips. Palpi Sepia above, second joint clothed with Sepia and whitish scaly hairs. Palpi below, thorax, legs and abdomen irrorated with adpressed whitish hairs, tarsi faintly ringed with white.

Upperside: ground colour of both wings Sayal Brown (XXIXi), densely overlaid with Sepia scales in subterminal and terminal areas. *Forewing*: a very dark blackish brown suffusion filling up the distal half of cell except a small space near the discocellular; a rounded discocellular spot; a broad discal band widened at costa and ending at vein M_3 , separated from the discocellular spot by a small patch of the ground colour and edged distally by a trace of the ground colour. Bases of areas Cu_1 and Cu_2 overlaid with grey scales (sexual patch), but less extensively than in *protumnus*; the discal spots in these areas are only slightly showing through the grey scaling and are placed in line with the inner lower angle of the upper part of the discal band; those in area A_2 are more distinct and elongate, the upper one just touches a medial elongated spot near the cell before the origin of vein Cu_2 . Cilia Sepia checkered with white.

Hindwing: a narrow dark discocellular bar; discal band placed much nearer to discocellular than to outer margin (the reverse is the case in *protumnus*), indistinct above vein M_1 , continuous and broad between M_1 and M_3 ; below M_3 , very narrow and shifted basad in line with the inner lower angle of the broad part. Cilia less prominently checkered than in forewing, the white being infuscated.

Underside: forewing: ground colour Cinnamon-Buff (XXIXb); costal and subcostal areas and cell except its distal end, suffused

with greyish; a dark streak at base of cell, a small round spot beyond middle of cell, above origin of vein Cu_2 ; a broad discocellular bar; discal band broadish (narrower than above) from costa to vein M_3 , below which it is much narrower and broken up into spots arranged in a line parallel with outer margin and shifted inwards in line with the inner edge of the broad part of the band, the lower spot in A_2 being the smallest; a series of sagittate postdiscal dark marks parallel with outer margin; apical area above vein M_1 , between the discal band and outer margin, thickly irrorated with white scales, a trace of white irroration along the upper part of the inner edge of the discal band; subterminal and terminal areas suffused with Sepia. Cilia dark, checkered with lighter areas which are whitish at base.

Hindwing: greyish white irrorated with Sepia and blackish scales; two large ocellate spots above the cell; a prominent Sepia discocellular narrow bar, its upper end produced at right angles basad along upper margin of cell; two smaller ocellate spots in cell along its lower margin; discal band consists of fused ocellate spots of light Sepia, tinged with dark Sepia on their inner side, diffuse above M_1 , strongly excurved between M_1 and M_3 , somewhat diffuse and interrupted at vein Cu_2 , darker and more distinct below it; subterminal and terminal areas irrorated with Sepia scales, leaving a whitish area bordering the discal band and some whitish in areas M_1 and RS near the outer margin. Cilia dark, less distinctly checkered than in forewing.

Length of forewing 16.7 mm. *Antenna-wing ratio*: 0.33.

Genitalia (Text-fig. 8). *Uncus* slender, forked, the prongs being one-and-a-half times longer than the stalk which is slightly thickened at middle; *falces* very slender, a little widened in the basal third, strongly upcurved in the distal two-thirds; *valve*: ventral margin twice the length of costa (dorsal margin), distal part bilobate, dorsal lobe broad, with the apex nearly rectangular and incurved, ventral lobe narrower, acute and downcurved; *labides* (paired sclerotised processes arising in the membrane above the *anellus*) very broad (as broad as the tubular part of the *aedoeagus*), of the same length as the costa of the valve, deeply hollowed out above and pointed at tip. *Aedoeagus* one-and-a-quarter times the length of the valve, with a very long and narrow basal prong (one-third of the total length), tubular part of even width and as long as the distal excised portion which is ventrally drawn out into a long spine-like and slightly upcurved tip.

Description of female allotype. Very much larger than male (forewing 20.5 mm.). *Upperside*: ground colour of both wings above Orange-Buff (Ridgway, IIIId). Costal areas of both wings, the cell, base of area M_1 , and of anal area of hindwing, Tawny Olive (XXIXi). *Forewings*: discal band very wide at costa, narrowed to vein M_1 , curved basad to vein M_3 , then shifted basad, its outer edge being in line with the inner edge of the upper portion.

on the inner side it is completely fused with the medial spots; the spot in cell above origin of vein Cu_2 smaller than in male and also fused with the underlying dark markings; a broad Sepia marginal band 4 mm. wide; cilia Sepia checkered with light grey. *Hindwing*: discal band confined to areas Cu_2 to M_3 , the component spots being diffusely separated on the veins; it is placed nearer to the discocellulars than to outer margin (in the female paratype about midway between them); discocellular bar almost obsolete; cilia Sepia with hardly any checkering.

Underside: forewing: as in male, but cell-spot above origin of vein Cu_2 missing and a small spot present in area A_2 below the origin of vein Cu_2 ; postdiscal sagittate marks very prominent.

Hindwing: essentially the same as in male, whitish areas not so conspicuous, dark inner edging of discal spots less prominent; discocellular bar more distinctly separable into two ocellate spots. *Antenna-wing ratio*: 0.3. *Note*. The dark markings are liable to reduction as seen in the female paratype.

Remarks. This apparently very local species somewhat resembles *protumnus* and has probably been confused with it in many collections.

Besides the differences given in the diagnosis, both sexes can be identified by the presence on the forewing underside of a small basal spot in the cell and by the postdiscal series of sagittate marks. It is possible that the specimens from Plettenberg Bay referred to *protumnus* by Trimen (S.A. Butt. II, p. 229) were not that species but the presently described one, as Trimen mentions the submarginal row of sagittate spots which, apart from *braunsi*, are only found in *brachycerus*, a species not easily confused with *protumnus* because of its distinctive appearance and shorter antennae.

I am dedicating this species to the late Dr. H. Brauns whose name is closely associated with Willowmore where he did most of his entomological work.

Thestor protumnus aridus subsp.n. (Plates I, II, fig. 11, holotype ♂, 12 allotype ♀).

Holotype ♂: Matjesfontein, C.P., 22-26 September, 1940 (G. van Son);

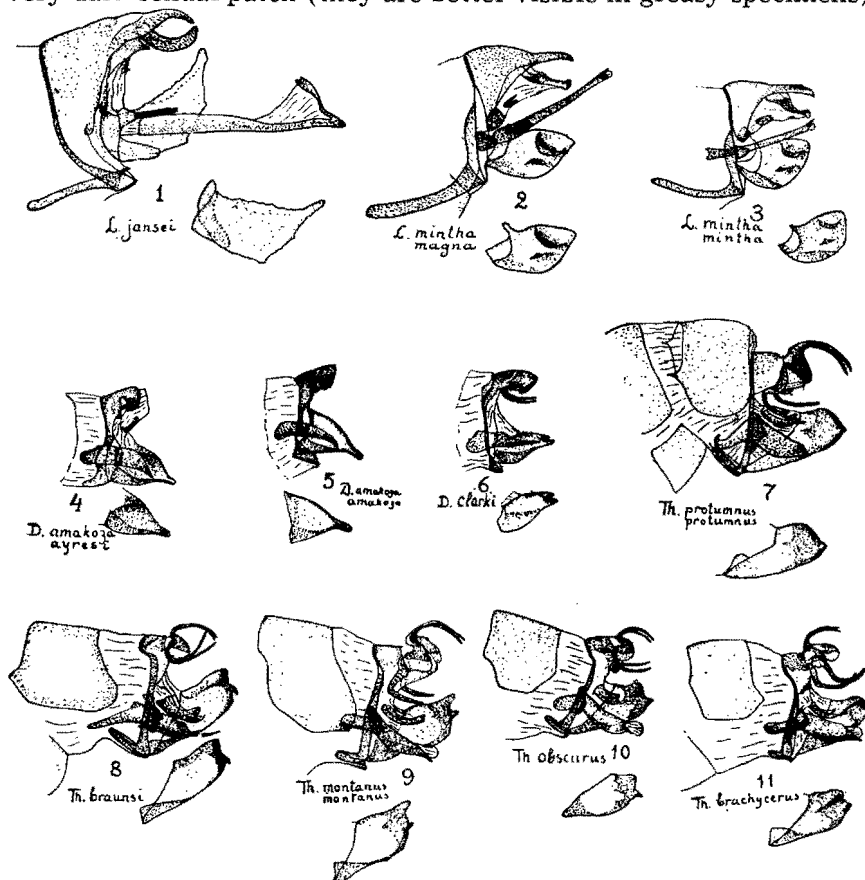
Allotype ♀: same locality and date;

Paratypes. 5 ♂♂, 1 ♀, same locality and date; ♂, Gifberg, Van Rhynsdorp Distr., C.P., 6 November, 1934 (G. van Son); ♂♀, farm "Resolution", Albany Distr., C.P., October, 1927 (Miss A. Walton); ♂, Bloemfontein, O.F.S., 26 October, 1918 (H. E. Irving); all in the Transvaal Museum collection.

Diagnosis: differs from *p. protumnus* in the greater extent of the orange areas of upperside, which are not suffused with darker scales except at base; sexual patch darker and larger than in *p. protumnus*; discal band narrower and separated from the marginal band (which is also narrower) by a wider space of ground

colour; black markings of the female are much reduced; on the underside, the discal spots in M_3 and Cu_1 are placed more vertically above one another, not so obliquely as in *p. protumnus*.

Description of male holotype. Upperside: ground colour of both wings Orange-Buff (Ridgway, IIId). Forewing: costal area and base infuscated; a black discocellular spot, as broad as long; discal band deep black, narrow, fused from costa to vein M_3 ; discal spots in Cu_1 and Cu_2 almost entirely hidden by the extensive and very dark sexual patch (they are better visible in greasy specimens)



Text-figures 1-11.

and correspond with those of the underside; marginal band narrower than in *p. protumnus* (2 mm. wide except near apex where it is 2.8 mm. wide) Hindwing: infuscated in the costal area, cell, area M_1 and along outer margin where the infuscation is widest at

vein M_1 , but rapidly decreases in width and intensity and is obsolete below vein Cu_2 ; a prominent black discal band between veins M_1 and M_3 and traces of small discal spots in Cu_1 and Cu_2 .

Underside: forewing: Light Orange-Yellow (Ridgway, IIIId), slightly infuscated in costal area and with a diffuse macular marginal band, narrower than on upperside; a minute round spot at middle of cell; discocellular spot a little smaller than above, discal band narrower than above and with an additional spot at costa in area R_3 (smaller than the other spots of the band); discal spots in Cu_1 and Cu_2 placed vertically; a minute spot below origin of vein Cu_2 ; cilia whitish checkered with fuscous, with a narrow fuscous line at base. *Hindwing:* whitish irrorated with fuscous scales, spots arranged as in *p. protumnus* except that the two uppermost spots of the discal band (in M_1 and RS) are shifted further inwards, and all the spots are a little smaller, more distinctly ocellate and more sharply delimited, and the dark inner edging of the discal spots is more prominent; cilia less distinctly checkered than in forewing. Length of forewing 17.5 mm. Antenna-wing ratio: 0.33.

Genitalia: not different from those of *p. protumnus* (Text-fig. 7), except that the apex of the valve is a little more acute.

Description of female allotype. Much larger than male. *Upperside:* both wings Orange-Buff. *Forewing:* costa and lower margin of cell as far as origin of vein Cu_2 , tinged with greyish; a discocellular quadrangular black patch; discal markings reduced to a slightly S-shaped narrow broken-up band from R_3 to M_3 , all other spots are quite absent (in some paratypes there are reduced spots at bases of areas Cu_1 and Cu_2). *Hindwing:* as in male, but less strongly infuscated in the costal and basal areas; the short discal band (between veins M_1 and M_3) is separated from the marginal band by a strip of the ground colour.

Underside: forewing as in male, but spot at middle of cell and discal spot in area Cu_1 absent; the spot in area Cu_2 and that below origin of vein Cu_2 are vestigial; a submarginal series of small black dots merging distally into the diffuse marginal band.

Hindwing: grey, evenly irrorated with darker scales, giving it a uniform Drab (Ridgway, XLVI) coloration; basal and medial spots a little lighter than ground colour, with a faint yellowish tinge; discal band composed of ocellate spots of almost the same colour as the wing itself, with only a mere trace of a yellowish hue, very narrowly edged with darker lines. inner dark edging prominent but much narrower than in male. Cilia of both wings light grey faintly checkered with darker spots at the veins.

Length of forewing 21 mm. Antenna-wing ratio: 0.33 (as in male).

Remarks. Unlike the nominotypical *protumnus* which has a very limited range (Cape Peninsula and adjoining country South of the main mountain ranges), *p. aridus* has a very wide distribution over the greater part of the Cape Province and of the Orange Free State.

and has been recorded from the Transvaal. Its South-Western limits are apparently the Northern slopes of the high mountain ranges bordering on the Great Karroo: Hex River Mountains, Wittebergen, Anysberg and the Little and Great Zwartberg.

I have not seen any specimens of *protumnus* from the Little Karroo.

Thestor montanus sp.n. (Plates I, II, fig. 13, holotype ♂, 14, allotype ♀).

Holotype ♂, *allotype* ♀ and 2 ♂♂ *paratypes*, Assegaibos, near La Motte, French Hoek Mountains, 11-18 October, 1940 (G. van Son), in the Transvaal Museum collection.

Diagnosis. Resembles *protumnus* L., but smaller, with broader and more rounded wings, discal band of forewing continuous and of even width from below costa to area A_1 (macular and shifted inwards below vein M_1 in *protumnus*).

Description of male holotype. Head, thorax and abdomen, and palpi above black. Antennae black above, with some white before the tip, brownish below. Second joint of palpi below clothed with rather short white hairs, third joint less than half the length of the second, brownish with some white scaling at base. Thorax below clothed with very long whitish hairs, legs sparsely clothed with short whitish hairs.

Upperside. Ground colour Ochraceous-Buff (Ridgway, XVb), very densely irrorated with blackish-brown scales, the space between the discocellular bar and the discal band, and the area just outside the discal band in forewing are less densely irrorated. *Forewing:* basal, costal and inner-marginal areas, and a broad marginal area, densely irrorated with blackish-brown; a black longitudinal streak in cell above lower angle; a broad black discocellular spot; discal band broad, black, evenly excurved from below costa to vein M_1 , then a little incurved below the veins, its inner edge being fused with a very dark sexual patch at extreme bases of areas Cu_1 and Cu_2 . *Hindwing* densely irrorated with blackish-brown throughout, only a little less densely so in the discal and subterminal areas below vein M_1 (in a paratype the irroration is so dense that the dark markings are almost invisible); the cell is darkened throughout, the narrow discocellular bar being only a shade darker; a dark, diffuse and narrow discal band is present between RS and the anal-marginal area, its upper and lower ends being merged into the dark irroration, it is slightly excurved and widened between veins M_1 and M_2 . *Cilia* light grey checkered with blackish-brown on the veins, with a dark line at base and another narrower one beyond middle.

Underside: both wings light grey irrorated with blackish-brown scales. *Forewing:* discal area faintly tinged with Orange-Buff; a small round spot in cell at origin of vein Cu_2 , and a similar spot below it in area A_1 , the latter connected with a black longitudinal streak running inwards; discocellular spot much narrower

than above; discal band macular, its component spots smaller than above and well separated, evenly excurved but slightly angular on vein M_3 ; the spot in A_2 ($A_1 + A_2$) double, smaller and fainter than the other spots; a postdiscal series of small blackish lunules.

Hindwing: basal and medial spots only indicated by their narrow black edging; discal band consists of a complete excurved row of elongated spots ringed with blackish, their colour is only a little darker than the wing itself; a postdiscal series of very small blackish lunules. *Cilia* of both wings grey with a faint trace of darker checkering.

Length of forewing 15 mm. *Antenna-wing ratio*: 0.3.

Genitalia (Text-fig. 9). *Uncus* forked from about middle; *falces* laterally compressed and gradually widened in the basal third, sickle-shaped and curved posteriad in the distal two-thirds, very acute at tips; *labides* narrower than in *protumnus*, about the length of the distal margin of the valve; *valve* elongate-rhomboid, ventral margin distally a little concave, one-and-a-half times the length of the costa; distal margin obtusely angled below middle; apex produced into a subtriangular lobe; a similar but smaller incurved lobe is present midway between the apex and the obtuse angle of the distal margin; *aedoeagus* a little shorter than the valve, with a broad, rounded basal prong less than a third of the total length; the obliquely excised open distal end of the tubular part is only one-fifth of the total length and is distally produced into a short straight spine; anellus with the sides broad, posteriorly bisinuate and angled at middle, dorsally widened and produced anteriad in the upper quarter.

Description of female allotype. A little larger than male.

Upperside: *forewing*: ground colour less extensively darkened than in male, leaving the greater part of the wing almost free from irroration which is confined to the basal, costal, supramarginal and outer-marginal areas; discocellular spot a little narrower than in

Explanation of Plate I.

Upperside of:

- | | |
|---|---|
| 1. <i>Leptoneura jansei</i> Swierstra, allotype ♂. | 11. <i>Thestor protumnus aridus</i> subsp.n., holotype ♂. |
| 2. <i>Leptoneura mintha magna</i> subsp.n., holotype ♂. | 12. <i>Thestor protumnus aridus</i> subsp.n., allotype ♀. |
| 3. <i>Leptoneura mintha mintha</i> (Geyer). | 13. <i>Thestor montanus</i> sp.n., holotype ♂. |
| 4. <i>Durbania amakoza ayresi</i> subsp.n., holotype ♂. | 14. <i>Thestor montanus</i> sp.n., allotype ♀. |
| 5. <i>Durbania amakoza ayresi</i> subsp.n., allotype ♀. | 15. <i>Thestor montanus pictus</i> subsp.n., holotype ♂. |
| 6. <i>Durbania clarki</i> sp.n., holotype ♂. | 16. <i>Thestor obscurus</i> sp.n., holotype ♂. |
| 7. <i>Durbania clarki</i> sp.n., allotype ♀. | 17. <i>Thestor obscurus</i> sp.n., allotype ♀. |
| 8. <i>Thestor braunsi</i> sp.n., holotype ♂. | 18. <i>Thestor brachycerus</i> (Trimen), ♂. |
| 9. <i>Thestor braunsi</i> sp.n., allotype ♀. | 19. <i>Thestor brachycerus</i> (Trimen), ♀. |
| 10. <i>Thestor braunsi</i> sp.n., paratype ♀. | |

All figures natural size.

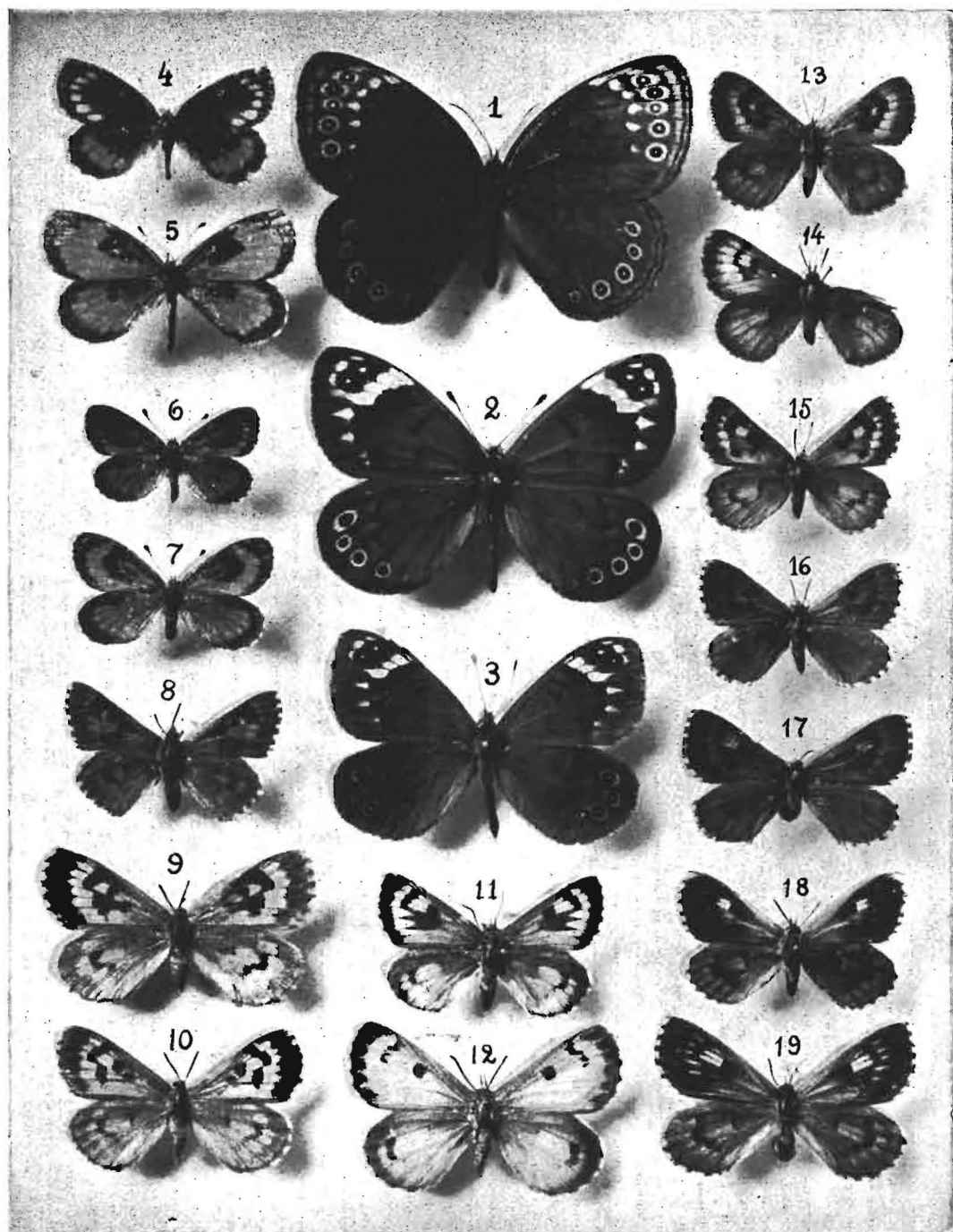
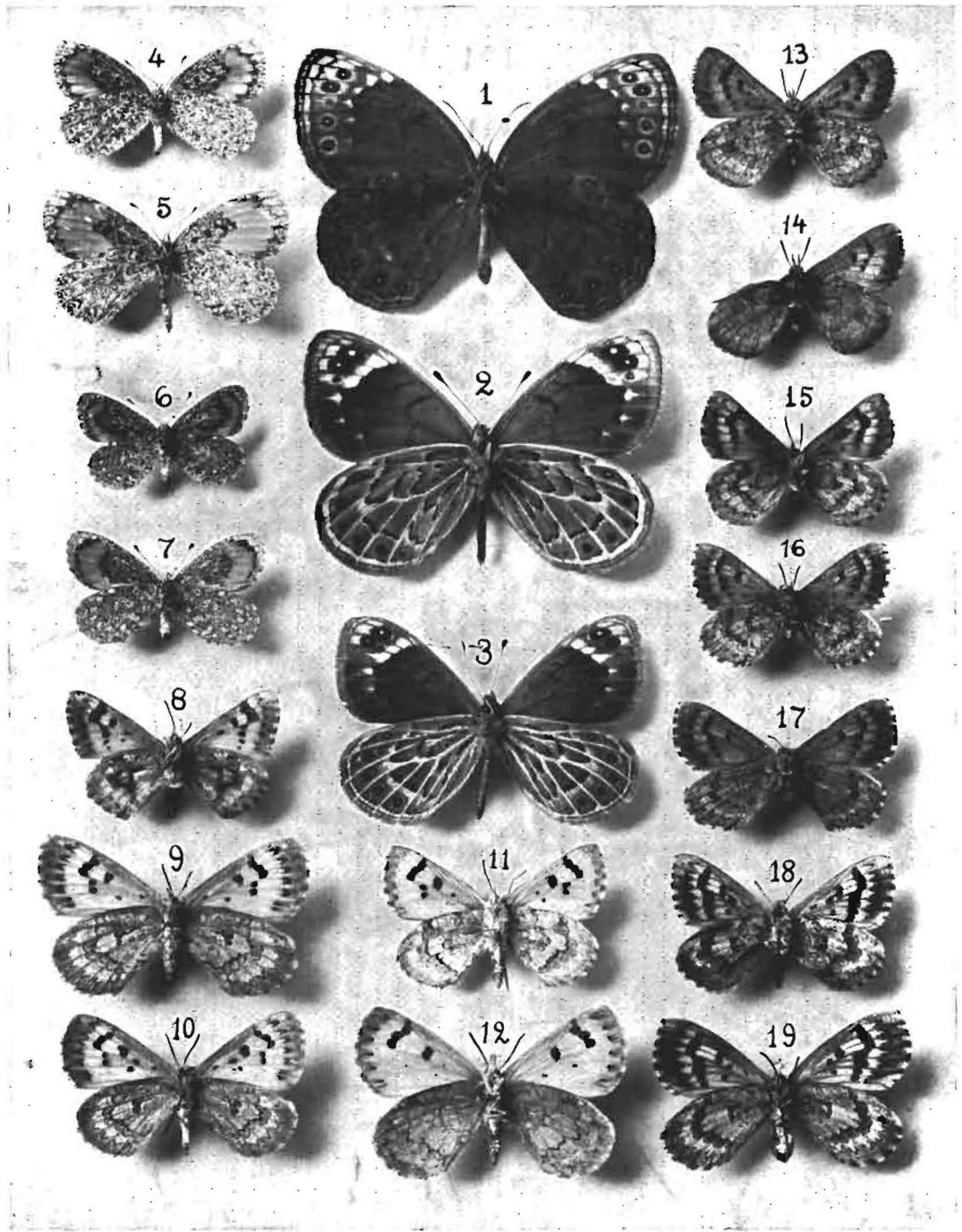


Plate II.



male; discal band very narrow in areas R_3 to M_1 , widened and a little produced distad on the veins Cu_1 and Cu_2 .

Note. The greater part of the right forewing is missing, most probably due to an attack by a lizard. *Hindwing* darkened in the costal, basal and anal-marginal areas, but without any trace of discal markings. *Underside* very similar to that of the male, but the spot in the cell and those in A_2 are absent. *Cilia* as in male.

Length of forewing 15.8 mm. *Antenna-wing ratio*: 0.3.

Remarks. This species was found at a considerable elevation on a steep mountain-side well above the level of the Assegaibos forestry station (approximately at 4,000 feet above sea level). From the structure of the male genitalia and also the shape of the wings and arrangement of the discal markings it is rather similar to *T. obscurus* which is described elsewhere in this paper, but the distinctions in the genitalia are undoubtedly of a specific nature which is further apparent from the orange markings somewhat resembling those in *protumnus*. A peculiar local race of this species with rather distinctive markings but identical genitalia is described hereunder.

Thestor montanus pictus subsp.n. (Plates I, II, fig. 15, holotype ♂).

Holotype ♂ and *paratype* ♂, Garcias Pass, Riversdale District, C.P., 15 November, 1940 (G. van Son), in the Transvaal Museum collection.

Description of male holotype. More vividly marked than *m. montanus* and less strongly irrorated with dark scales. *Upper-side: forewing*: distal third of cell black, forming, together with the discocellular mark, a continuous elongate-quadrangular patch; discal band much more prominent than in *m. montanus* and straighter; sexual patch at bases of areas Cu_1 and Cu_2 much more distinct; orange space beyond discal band sharply delimited, its outer edge being strongly indented on the veins by the very dense and broad marginal band. *Hindwing*: discocellular mark more distinct than in *m. montanus*, discal area less densely irrorated and discal band therefore more prominent.

Explanation of Plate II.

Underside of:

- | | |
|---|---|
| 1. <i>Leptoneura jansei</i> Swierstra, allotype ♂. | 11. <i>Thestor protumnus aridus</i> subsp.n., holotype ♂. |
| 2. <i>Leptoneura mintha magna</i> subsp.n., holotype ♂. | 12. <i>Thestor protumnus aridus</i> subsp.n., allotype ♀. |
| 3. <i>Leptoneura mintha mintha</i> (Geyer). | 13. <i>Thestor montanus</i> sp.n., holotype ♂. |
| 4. <i>Durbania amakoza ayresi</i> subsp.n., holotype ♂. | 14. <i>Thestor montanus</i> sp.n., allotype ♀. |
| 5. <i>Durbania amakoza ayresi</i> subsp.n., allotype ♀. | 15. <i>Thestor montanus pictus</i> subsp.n., holotype ♂. |
| 6. <i>Durbania clarki</i> sp.n., holotype ♂. | 16. <i>Thestor obscurus</i> sp.n., holotype ♂. |
| 7. <i>Durbania clarki</i> sp.n., allotype ♀. | 17. <i>Thestor obscurus</i> sp.n., allotype ♀. |
| 8. <i>Thestor braunsi</i> sp.n., holotype ♂. | 18. <i>Thestor brachycerus</i> (Trimen), ♂. |
| 9. <i>Thestor braunsi</i> sp.n., allotype ♀. | 19. <i>Thestor brachycerus</i> (Trimen), ♀. |
| 10. <i>Thestor braunsi</i> sp.n., paratype ♀. | |

All figures natural size.

Underside: forewing: black markings wider than in *m. montanus*; discal band completely fused and reaches down to vein Cu_2 ; it is constricted below vein M_3 . *Hindwing:* as in *m. montanus*, but all spots and bands distinctly darker than ground colour. *Cilia* of both wings much more distinctly checkered than in *m. montanus*.

Length of forewing 14.7 mm. *Antenna-wing ratio:* 0.34.

Remarks. At a first glance the presently described form gives a rather different impression than *m. montanus*, especially because of the more distinct sexual patch, the difference in the shape of the discal band of the upperside and its complete fusion on the underside. The slight difference in the antenna-wing ratio, combined with the above mentioned differences, would suggest a specific separation, but the comparison of the male genitalia with those of *m. montanus* reveals such a striking similarity that I have no hesitation in treating this form as a subspecies of *montanus*.

Subspecific differences are not necessarily limited to the coloration and shape of the markings, but are in fact usually also shown in minute structural details which, however, have not yet reached a degree sufficient to warrant specific separation.

***Thestor obscurus* sp.n.** (Plates I, II, fig. 16, holotype ♂, 17, allotype ♀). *Arrugia brachycera* var., Trimen, Trans. ent. Soc. London, p. 353 (1883).

Holotype ♂, allotype ♀, Muizenberg (near top of hill), C.P., 27 December, 1934 (G. van Son);

Paratypes: 9 ♂♂, same locality and date; 3 ♂♂, Capetown, no date (A. Ross).

Diagnosis. Smaller than *brachycerus* Trimen; *forewing:* no whitish patch outside discocellular bar; discal band evenly curved (strongly shifted inwards below M_3 in *brachycerus*); *hindwing:* discal band absent (prominent in *brachycerus*).

Description of male holotype. Vertex of head, *antennae* and *plagi* above Mummy Brown (Ridgway, XVm) *antennae* below and at tips whitish; *thorax* and *abdomen* above black clothed with Sepia (XXIXm) and some greyish-white hairs, *thorax* below clothed with long whitish hairs, *abdomen* below densely scaled with white.

Upperside: ground colour of both wings uniformly Mummy Brown. *Forewing:* a diffuse, rather narrow darker discocellular bar and a discal band of the same colour, evenly excurved from below costa to vein Cu_2 ; sexual patch at base of areas Cu_1 and Cu_2 almost entirely confined to the veins themselves and only spreads a little at the base of area Cu_2 . *Hindwing:* entirely unmarked, no trace of either discocellular bar or discal band being visible. *Cilia* of both wings of the same colour as the wings themselves, prominently checkered with white and with a faint dark line along middle.

Underside: forewing: ground colour Light Drab (Ridgway, XLVib), costal half including cell irrorated with whitish-grey scales except on the veins; discocellular bar more prominent than on upperside; discal band macular, with an additional discal spot in area A_2 and an indistinct medial one below origin of vein Cu_2 ; a postdiscal series of dark bars edged inwardly with white, beyond which the ground colour is darkened; a fine dark terminal line. *Hindwing:* almost entirely irrorated with Pale Mouse Gray (Ridgway, Lif) scales, with the markings chiefly defined by their dark edgings, a small indistinct ocellate spot above base of cell and a larger ocellate spot above upper angle; discocellular spot defined by two narrow dark bars, somewhat interrupted at middle; discal band narrowly outlined distally, with prominent dark lunular spots along its inner side, the internal edging of spots is obsolete; a postdiscal series of small sagittate marks.

Cilia as on upperside.

Length of forewing 15 mm. *Antenna-wing ratio:* 0.26.

Genitalia (Text-fig. 10). *Uncus* forked from very near base, the prongs evenly curved; *falces* very long (considerably longer than uncus), narrow, strongly twisted before middle; *valve* with distal margin bilobate, dorsal lobe much wider than ventral, the latter acutely produced; *aedoeagus* a little shorter than valve, with a broad basal prong, distal excised end short (only about one-sixth of total length), terminating in a downcurved and acute tip; *anellus* with the sides broader in the lower half, their posterior edges are roundly excurved below middle; *saccus* short.

Description of female allotype. Larger than male, wings more elongate. *Upperside: forewing:* the space between the discocellular bar and the discal band, and a narrow space along the outside of the discal band are a little lighter than in male; *hindwing:* as in male.

Underside: ground colour of both wings darker than in male, there being no white irroration except near apex of *forewing*.

The spots in *hindwing* are smaller in proportion than in the male. *Length of forewing* 17.5 mm. *Antenna-wing ratio:* 0.24.

Remarks. The presently described species has been until now considered as a "dark variety" of *T. brachycerus* (Trimen). A comparison of the male genitalia with those of *brachycerus* (Text-fig. 11) shows sufficient differences to separate them specifically. The main points of difference are as follows: the dorsal lobe of the *valve* in *brachycerus* is smaller than the ventral one and is separated from it by a raised ridge continued basad to about one-third of the valve's length from apex; the *aedoeagus* in *brachycerus* is longer than the valve and its excised distal part is longer in proportion to the total length; the sides of the *anellus* are broader in *brachycerus* and their posterior edges are angularly produced (rounded in

obscurus). In order to clear up any confusion which may exist in some collections, I am figuring both sexes of *T. brachycerus* compared with specimens from the type locality (Plates I, II, fig. 18, ♂, 19, ♀).

In conclusion, I wish to express my sincere thanks to the following persons who, by kind gifts of specimens, have greatly assisted me in the preparation of this paper: to the late Mr. P. R. Robertson, of "Struan", Muizenberg, C.P., who kindly supplied specimens of *Leptoneura mintha mintha*, and in whose most pleasant company, at Christmas 1934, I was able to procure many specimens of *Thestor obscurus*. His passing on the 17th May of this year is sorely felt by all his friends and is a sad loss to South African Entomology; to Mr. D. A. Swanepoel, of Pietersburg, Transvaal, for a fine series of the rare *Leptoneura jansei*; to Mr. Gowan C. Clark, of Port Elizabeth, for specimens of the new *Durbanian clarki*; and to Mr. H. E. Irving, of Bloemfontein, and Miss A. Walton, of "Resolution", Albany District, for specimens of *Thestor protumnus aridus*.